

Appl. No. : 10/637,450  
Filed : August 8, 2003

AMENDMENTS TO THE CLAIMS

Please amend the Claims as follows. Insertions are shown underlined while deletions are ~~struck-through~~. Please cancel Claims 11 and 30 without prejudice. Please add Claims 31-33.

1 (canceled)

2 (canceled)

3 (canceled)

4 (canceled)

5 (canceled)

6 (canceled)

7 (canceled)

8 (canceled)

9 (canceled)

10 (canceled)

11 (canceled)

12 (currently amended): ~~The~~A non-aqueous secondary battery according to Claim ~~11~~ comprising a positive electrode, a negative electrode, a separator, and a non-aqueous electrolyte containing lithium salt and having a flat shape, wherein when a pressure of  $2.5 \text{ kg/cm}^2$  is applied to the direction of thickness of the separator, the thickness A of the separator is not less than 0.02 mm and not more than 0.15 mm and ~~the~~a porosity of the separator is 40% or higher, and

when the absolute value of a change rate of the thickness (mm) of the separator relative to the pressure ( $\text{kg/cm}^2$ ) applied to the direction of thickness of the separator is defined as B ( $\text{mm}/(\text{kg/cm}^2)$ ), ~~the~~ pressure F which renders  $B/A=1$  is not less than  $0.05 \text{ kg/cm}^2$  and not more than  $1 \text{ kg/cm}^2$ .

13 (currently amended): The non-aqueous secondary battery according to Claim ~~11~~12, wherein the separator has a first separator and a second separator different from the first separator, the first separator is the separator as recited in Claim 12, and

~~when a pressure of  $2.5 \text{ kg/cm}^2$  is applied to the direction of thickness of the separator, the thickness A of the first separator is not less than 0.02 mm and not more than 0.15 mm and the porosity of the first separator is 40% or higher, and~~

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when the absolute value of a change rate of the thickness (mm) of the first separator relative to the pressure ( $\text{kg}/\text{cm}^2$ ) applied to the direction of thickness of the first separator is defined as  $B$  ( $\text{mm}/(\text{kg}/\text{cm}^2)$ ), the pressure  $F$  which renders  $B/A=1$  is not less than  $0.05 \text{ kg}/\text{cm}^2$  and not more than  $1 \text{ kg}/\text{cm}^2$ , and

the second separator is a micro-porous film having a thickness of 0.05 mm or less, a pore diameter of  $5 \mu\text{m}$  or less, and a porosity of 25% or more.

14 (currently amended): The non-aqueous secondary battery according to Claim 11 comprising a positive electrode, a negative electrode, a separator, and a non-aqueous electrolyte containing lithium salt and having a flat shape, wherein the separator is made of a material including polyethylene and is bonded with the positive electrode and/or the negative electrode by fusing the polyethylene in the separator.

15 (currently amended): The non-aqueous secondary battery according to Claim 14, wherein the separator is bonded with the positive electrode and the negative electrode by fusing part of the separator and, passages for the non-aqueous electrolyte are formed to penetrate the separator from the front side surface to the rear side surface thereof.

16 (original): The non-aqueous secondary battery according to any one of Claims 12 to 15, wherein the non-aqueous secondary battery has a flat shape with a thickness of less than 12 mm and is at least 30Wh in energy capacity and at least 180 Wh/l in volume energy density.

17 (currently amended): The non-aqueous secondary battery according to any one of Claims 12 to 16, wherein the front side and the rear side of the flat shape are rectangular.

18 (currently amended): The non-aqueous secondary battery according to any one of Claims 12 to 16, wherein the wall thickness of a battery case of the non-aqueous secondary battery is not less than 0.2 mm and not more than 1 mm.

19 (currently amended): The non-aqueous secondary battery according to any one of Claims 12 to 15, wherein the separator is made of a material comprising at least one of polyethylene or polypropylene as a main component.

20 (original): The non-aqueous secondary battery according to Claim 12, wherein the separator is made of non-woven fabric.

21 (previously presented): The non-aqueous secondary battery according to Claim 20, wherein the unit weight of the separator is not less than  $5 \text{ g}/\text{m}^2$  and not more than  $30 \text{ g}/\text{cm}^2$ .

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22 (original): The non-aqueous secondary battery according to Claim 13, wherein the first separator is made of non-woven fabric.

23 (previously presented): The non-aqueous secondary battery according to Claim 22, wherein the unit weight of the first separator is not less than 5 g/m<sup>2</sup> and not more than 30 g/m<sup>2</sup>.

24 (original): The non-aqueous secondary battery according to Claim 13, wherein the first and second separators are joined together integrally.

25 (original): The non-aqueous secondary battery according to Claim 13, wherein the material of the first separator is different from that of the second separator.

26 (original): The non-aqueous secondary battery according to Claim 13, wherein at least one of the first and second separators contain polyethylene.

27 (canceled)

28 (canceled)

29 (canceled)

30 (canceled)

31 (new): The secondary battery according to Claim 14, wherein the material including polyethylene further comprises a component having a fusing point different from that of polyethylene.

32 (new): The secondary battery according to Claim 31, wherein the component is polypropylene.

33 (new): The secondary battery according to Claim 32, wherein the polypropylene constitutes a core material and the polyethylene constitutes an external layer.